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E2	209	AU=GAZI T, EHUD
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E4	1	AU=GAZI T, EHUT
E5	2	AU=GAZI T, EMANUEL
E6	39	AU=GAZI T, EPHRAIM
E7	1	AU=GAZI T, EPHRAYIM
E8	4	AU=GAZI T, G
E9	1	AU=GAZI T, G
E10	10	AU=GAZI T, GADI
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Enter P or PAGE for more

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3/3, K/1 (item 1 from file: 24)  
DIALOG(R) File 24: CSA Life Sciences Abstracts  
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0003502673 IP ACCESSION NO: 8820610  
Crystallization of Doc and the Phd-Doc toxin-antitoxin complex

Garcia-Pino, Abel; Dao-Thi, Minh-Hoa; Gazi, Ehud; Magnuson, Roy  
David; Wijns, Lode; Loris, Remy  
Laboratorium voor Ultrastructuur, Vrije Universiteit Brussel, Pleinlaan 2,  
B-1050 Brussel, Belgium [mailto:agarciap@ub.ac.be]

Acta Crystallographica Section F, v 64, n 11, p 1034-1038, November 1, 2008  
PUBLICATION DATE: 2008

Untitled  
PUBLISHER: Blackwell Publishing Ltd., 9600 Garsington Road

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 1744-3091

FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

Crystallization of Doc and the Phd-Doc toxin-antitoxin complex

Garcia-Pino, Abel; Dao-Thi, Minh-Hoa; Gazit, Ehud; Magnuson, Roy David; Wins, Lode; Loris, Remy

ABSTRACT:

... its plasmidic form in *Escherichia coli* and is the archetype of a family of bacterial toxin-antitoxin modules. The Hs66Tyr mutant of Doc (Doc super (H66Y)) was crystallized in space group...

3/3, K2 (Item 2 from file: 24)  
DIALCG(R) File 24: CSA Life Sciences Abstracts  
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0003013616 IP ACCESSION NO: 7288149

The *yefM-yoeB* Toxin-Antitoxin Systems of *Escherichia coli* and *Streptococcus pneumoniae*: Functional and Structural Correlation

Nieto, Concha; Cherny, Izhack; Khoo, Seok Kooi; de Lacoba, Mario Garcia; Chan, Wei Ting; Yeo, Chew Chieng; Gazit, Ehud; Espinosa, Manuel Centro de Investigaciones Biologicas, CSIC, Madrid, Spain. Department of Molecular Microbiology and Biotechnology, Tel Aviv University, Tel Aviv 69978, Israel. Department of Biotechnology, Malaysia University of Science and Technology, Petaling Jaya, Malaysia

Journal of Bacteriology, v 189, n 4, p 1266-1278, February 2007  
PUBLICATION DATE: 2007

PUBLISHER: American Society for Microbiology, 1752 N Street N.W. Washington, DC 20036 USA, [URL: <http://www.asm.org/>]

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0021-9193

ELECTRONIC ISSN: 1098-5530

FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

The *yefM-yoeB* Toxin-Antitoxin Systems of *Escherichia coli* and *Streptococcus pneumoniae*: Functional and Structural Correlation

... Cherny, Izhack; Khoo, Seok Kooi; de Lacoba, Mario Garcia; Chan, Wei Ting; Yeo, Chew Chieng; Gazit, Ehud; Espinosa, Manuel

ABSTRACT:

Toxin-antitoxin loci belonging to the *yefM-yoeB* family are located in the chromosome or in...

... locus of *Streptococcus pneumoniae*, and these genes encode bona fide antitoxin (*YefM* sub(Spn)) and toxin (*YoeB* sub(Spn)) products. We

Untitled  
showed that overproduction of YoeB sub(Spn) is toxic to...

...homologous, whereas the antitoxins appeared to be specifically designed for each bacterial locus; thus, the toxin-antitoxin interactions were adapted to the different bacterial environmental conditions. Both structural features, folding and...

3/3, K/3 (Item 3 from file: 24)  
DIALOG FILE 24: CSA Life Sciences Abstracts  
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0002893868 IP ACCESSION NO: 6517911  
The YoeB Toxin Is a Folded Protein That Forms a Physical Complex with the Unfolded YefM Antitoxin: Implications for a structural-based differential stability of toxin-antitoxin systems

Cherny, Izhack; Rockah, Liat; Gazit, Ehud  
Department of Molecular Microbiology and Biotechnology, George S. Wise Faculty of Life Sciences, Tel Aviv University, Tel Aviv 69978, Israel

Journal of Biological Chemistry, v 280, n 34, p 30063-30072, August 2005  
PUBLICATION DATE: 2005

PUBLISHER: American Society for Biochemistry and Molecular Biology, 9650 Rockville Pike Bethesda MD 20814-3996 USA, [mailto:[asrbn@asmb.org](mailto:asrbn@asmb.org)], [URL:<http://www.jbc.org>]

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0021-9258

ELECTRONIC ISSN: 1083-351X

FILE SEGMENT: Bacteriology Abstracts (Microbiology B); Genetics Abstracts

The YoeB Toxin Is a Folded Protein That Forms a Physical Complex with the Unfolded YefM Antitoxin: Implications for a structural-based differential stability of toxin-antitoxin systems

Cherny, Izhack; Rockah, Liat; Gazit, Ehud

#### ABSTRACT:

The chromosomal YoeB-YefM toxin-antitoxin module common to numerous strains of bacteria is presumed to have a significant role...

...protein, as we previously reported for the Phd antitoxin in the P1 phage Doc-Phd toxin-antitoxin system. Here we report the purification and structural properties of the YoeB toxin and present physical evidence for the existence of a tight YoeB-YefM polypeptide complex in...

...physical complex between the proteins. Near- and far-UV circular dichroism spectroscopy of the purified toxin revealed that, similar to the Doc toxin, YoeB is a well-folded protein. Thermal denaturation experiments confirmed the conformational stability of the YoeB toxin, which underwent reversible thermal unfolding at temperatures up to 56 degree C. The thermodynamic features of the toxin-antitoxin complex were similar. Taken together, our results support the notion of a correlation between differential physiological and structural stability in toxin-antitoxin modules.

IDENTIFIERS: YoeB toxin; YefM toxin

Untitled

3/3, K/4 (Item 1 from file: 50)

DI ALCG(R) FILE 50: CAB Abstracts

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0008636224 CAB Accession Number: 20043072465

The role of *Bacillus thuringiensis* Cry1C and Cry1E separate structural domains in the interaction with *Spodoptera littoralis* gut epithelial cells.

Avisar, D.; Keller, M.; Gazit, E.; Prudovsky, E.; Sneh, B.; Zilberman, A.

Author email address: aviah@post.tau.ac.il

Department of Plant Sciences, George S. Weizmann Faculty of Life Sciences, Tel Aviv University, Tel Aviv 69978, Israel.

Journal of Biological Chemistry vol. 279 (16): p.15779-15786

Publication Year: 2004

ISSN: 0021-9258

Digital Object Identifier: 10.1074/jbc.M812597200

Publisher: American Society for Biochemistry and Molecular Biology Inc Bethesda, USA

Language: English

Record Type: Abstract

Document Type: Journal article

... and lower K<sub>1/2</sub> than Cry1C domain II and further supported the existence of toxin multisite interactions. Competitive binding assays were used to estimate the sequence of interaction events. Cry1C...

... three domains specifically interact with the epithelial cell membrane. The folding of the three-domain toxin probably dictates the sequence of interaction events.

Avisar, D.; Keller, M.; Gazit, E.; Prudovsky, E.; Sneh, B.; Zilberman, A.

3/3, K/5 (Item 2 from file: 50)

DI ALCG(R) FILE 50: CAB Abstracts

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0007654000 CAB Accession Number: 19981112254

The structure and organization within the membrane of the helices composing the pore-forming domain of *Bacillus thuringiensis* delta-endotoxin are consistent with an "umbrella-like" structure of the pore.

Gazit, E.; Rocca, P.; Sansom, M. S. P.; Shai, Y.

Department of Biological Chemistry, Weizmann Institute of Science, Rehovot, 76100, Israel.

Proceedings of the National Academy of Sciences of the United States of America vol. 95 (21): p.12289-12294

Publication Year: 1998

ISSN: 0027-8424

Language: English

Record Type: Abstract

Document Type: Journal article

... The relative affinities for membranes of peptides corresponding to the seven helices that compose the toxin pore-forming domain, their modes of membrane interaction, their structures within membranes, and their orientations...

Gazit, E.; Rocca, P.; Sansom, M. S. P.; Shai, Y.

Untitled

3/3, K/6 (Item 3 from file: 50)

DI ALCG(R) File 50: CAB Abstracts

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0007590985 CAB Accession Number: 19980504640

*Bacillus thuringiensis* cytolytic toxin associates specifically with its synthetic helices A and C in the membrane bound state. Implications for the assembly of oligomeric transmembrane pores.

Gazit, E.; Burshtein, N.; Eltar, D. J.; Sawyer, T.; Shai, Y.

Department of Membrane Research and Biophysics, Weizmann Institute of Science, Rehovot 76100, Israel.

Biotechnology (Washington) vol. 36 (49): p. 15546-15554

Publication Year: 1997

ISSN: 0006-2960

Language: English

Record Type: Abstract

Document Type: Journal article

*Bacillus thuringiensis* cytolytic toxin associates specifically with its synthetic helices A and C in the membrane bound state. Implications...

... corresponding to beta5, beta6, and beta7 strands, to a conserved nonhelical region of the OytA toxin of *B. thuringiensis* subsp. *israelensis* (PSUP 149-170), to helices B and D, and...

... 149-170 and helix D bind the membrane weakly. Membrane permeation experiments suggested that OytA toxin exerts its activity by aggregation of several monomers. To learn about the structural elements that...

... the membrane. Taken together, these results provide further support for the suggestion that the OytA toxin self-assembles within membrane and that helices A and C are major structural elements involved in the membrane interaction and intermolecular assembly of the toxin.

Gazit, E.; Burshtein, N.; Eltar, D. J.; Sawyer, T.; Shai, Y.

3/3, K/7 (Item 4 from file: 50)

DI ALCG(R) File 50: CAB Abstracts

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0006949830 CAB Accession Number: 19950500311

Structural characterization, membrane interaction, and specific antibody assembly within phospholipid membranes of hydrophobic segments from *Bacillus thuringiensis* var. *israelensis* cytolytic toxin.

Gazit, E.; Shai, Y.

Department of Membrane Research and Biophysics, Weizmann Institute of Science, Rehovot 76100, Israel.

Biotechnology (Washington) vol. 32 (46): p. 12363-12371

Publication Year: 1993

ISSN: 0006-2960

Language: English

Record Type: Abstract

Document Type: Journal article

... specific antibody assembly within phospholipid membranes of hydrophobic segments from *Bacillus thuringiensis* var. *israelensis* cytolytic toxin.

Untitled

The *B. thuringiensis* subsp. *israelensis* (Bti) cytolytic toxin is hypothesized to exert its toxic activity via pore formation in the cell membrane as a result of the aggregation of several monomers. To gain insight into the toxin's mode of action, 2 putative hydrophobic 22 amino acid peptides were synthesized and characterized...

...helix-2), and the other to amino acids 50-71 (termed helix-1) of the toxin. Circular dichroism spectroscopy revealed that both segments adopt high alpha-helical content in the hydrophobic...

...for helices-1 and -2 in the assembly and in the pore formation by Bti toxin.

Gazit, E.; Shai, Y.

3/3, K/8 (item 1 from file: 98)  
DI ALCG(R) FILE: 98:General Sci Abs  
(c) 2009 The HW Wilson Co. All rts. reserv.

03808148 H.W. WILSON RECORD NUMBER: BGSI 98058148  
The structure and organization within the membrane of the helices composing the pore-forming domain of *Bacillus thuringiensis* d-endotoxin are consistent with an "umbrella-like" structure of the pore.

Gazit, Ehud

La Rocca, Paolo; Sansom, Mark S. P.

Proceedings of the National Academy of Sciences of the United States of America (Proc Natl Acad Sci U S A) v. 95 no21 (Oct. 13 '98) p. 12289-94

SPECIAL FEATURES: bibl ill ISSN: 0027-8424

LANGUAGE: English

COUNTRY OF PUBLICATION: United States

Gazit, Ehud

...ABSTRACT: the results suggest an "umbrella" model for the structure of the pores formed by the toxin. The findings also support previous suggestions that the a7 helix may function as the binding...

DESCRIPTIONS:

*Bacillus thuringiensis* toxin; Membrane fusion

3/3, K/9 (item 2 from file: 98)  
DI ALCG(R) FILE: 98:General Sci Abs  
(c) 2009 The HW Wilson Co. All rts. reserv.

02754244 H.W. WILSON RECORD NUMBER: BGSI 94004244

Structural characterization, membrane interaction, and specific assembly within phospholipid membranes of hydrophobic segments from *Bacillus thuringiensis* var. *israelensis* cytolytic toxin.

Gazit, Ehud

Shai, Yechiel

Biochemistry (American Chemical Society) (Biochemistry) v. 32 (Nov. 23 '93) p. 12363-71

DOCUMENT TYPE: Feature Article

SPECIAL FEATURES: bibl ill ISSN: 0006-2960

LANGUAGE: English

COUNTRY OF PUBLICATION: United States

...and specific assembly within phospholipid membranes of hydrophobic segments from *Bacillus thuringiensis* var. *israelensis* cytolytic toxin.

Gazit, Ehud

## Untitled

**ABSTRACT:** The *Bacillus thuringiensis* var. *israelensis* (Bti) cytolytic toxin is hypothesized to exert its toxic activity via pore formation in the cell membrane as a result of the aggregation of several monomers. To gain insight into the toxin's mode of action, 2 putative hydrophobic 22 amino acid peptides were synthesized and characterized...

...Elkar, D. J., & Chilcott, C. N. (1988) *J. Mbl. Biol.* 202, 527-535] of the toxin. Circular dichroism spectroscopy revealed that both segments adopt high alpha-helical content in a hydrophobic...

...for helices-1 and -2 in the assembly and in the pore formation by Bti toxin. Copyright 1993, American Chemical Society. .

**DESCRIPTORS:**

*Bacillus thuringiensis* toxin; Membranes (Biology...)

3/3, K/10 (Item 3 from file: 98)

DI ALCG(R) File 98: General Sci Abs  
(c) 2009 The HW Wilson Co. All rts. reserv.

02514029 H.W. WILSON RECORD NUMBER: BGSI 93014029

Structural and functional characterization of the a5 segment of *Bacillus thuringiensis* d-endotoxin.

Gazit, Ehud

Shai, Yechiel

*Biochemistry* (American Chemical Society) (*Biochemistry*) v. 32 (Apr. 6 '93)  
p. 3429-36

DOCUMENT TYPE: Feature Article

SPECIAL FEATURES: bibliogr. ISSN: 0006-2960

LANGUAGE: English

COUNTRY OF PUBLICATION: United States

Gazit, Ehud

**DESCRIPTORS:**

*Bacillus thuringiensis* toxin; Proteins...

3/3, K/11 (Item 1 from file: 143)

DI ALCG(R) File 143: Biol. & Agric. Index  
(c) 2009 The HW Wilson Co. All rts. reserv.

1068609 H.W. WILSON RECORD NUMBER: BBAI 99041346

The Doc toxin and Phd antidote proteins of the bacteriophage P1 plasmid addiction system form a heterotrimeric complex

Gazit, Ehud

Sauer, Robert T

*The Journal of Biological Chemistry* v. 274 no24 (June 11 1999) p. 16813-18

DOCUMENT TYPE: Feature Article ISSN: 0021-9258

The Doc toxin and Phd antidote proteins of the bacteriophage P1 plasmid addiction system form a heterotrimeric complex

Gazit, Ehud

3/3, K/12 (Item 1 from file: 399)

DI ALCG(R) File 399: CA SEARCH(R)  
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147516306 CA: 147(25) 516306m JOURNAL

Structural and Thermodynamic Characterization of the *Escherichia coli*

Untitled

Re: RE Toxin-Antitoxin System Indication for a Functional Role of Differential Stability

AUTHOR(S): Cherny, Izhack; Overgaard, Martin; Borch, Jonas; Bram, Yaron; Gerdes, Kenn; Gazit, Ehud

LOCATION: Department of Molecular Microbiology and Biotechnology, George S. Wise Faculty of Life Sciences, Tel Aviv University, 69978, Tel Aviv-Jaffa, Israel

JOURNAL: Biochemistry (Biotechnology) DATE: 2007 VOLUME: 46 NUMBER: 43  
PAGES: 12152-12163 CODEN: BIChAW ISSN: 0006-2960  
PUBLISHER ITEM IDENTIFIER: 0006-2960(70)01037-1 LANGUAGE: English  
PUBLISHER: American Chemical Society

3/3, K/13 (Item 2 from file: 399)  
DI ALG(R) File 399: CA SEARCH(R)  
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147482564 CA: 147(23) 482564b CONFERENCE PROCEEDING  
Bacterial toxin-antitoxin systems as targets for the development of novel antibiotics

AUTHOR(S): Alonso, Juan C.; Balsa, Dolores; Cherny, Izhack; Christensen, Susanne K.; Espinosa, Manuel; Francuski, Djordje; Gazit, Ehud; Gerdes, Kenn; Hitchin, Ed; Martin, M Teresa; Neto, Concepcion; Overweg, Karin; Pellecer, Teresa; Saenger, Wolfgang; Welfle, Heinz; Welfle, Karin; Willis, Jerry

LOCATION: Department of Microbial Biotechnology, Centro Nacional de Biología, CSIC, Madrid, Spain, 28049

JOURNAL: Enzyme-Mediated Resistance to Antibiotics EDITOR: Bonomo, Robert A. (Ed), Tolimsky, Marcelo (Ed), DATE: 2007 PAGES: 313-329 CODEN: 69J1O6 LANGUAGE: English PUBLISHER: American Society for Microbiology, Washington, D. C

3/3, K/14 (Item 3 from file: 399)  
DI ALG(R) File 399: CA SEARCH(R)  
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142367629 CA: 142(20) 367629m PATENT  
Antibacterial agents disrupting toxin-antitoxin binding and methods of identifying and utilizing such agents

INVENTOR/AUTHOR: Gazit, Ehud; Cherny, Izhack

LOCATION: Israel

ASSIGNEE: Ramot at Tel Aviv University Ltd.

PATENT: PCT International ; WO 200531362 A2 DATE: 20050407  
APPLICATI ON: WO 20041 L888 (20040927) \*US 2003PV507488 (20031002) \*US 2004PV550334 (20040308)

PAGES: 108 pp. CODEN: PI XXD2 LANGUAGE: English

PATENT CLASSIFICATION:  
CLASS: G01N-033/68A

DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; CZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MK; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM ZW DESIGNATED REGIONAL: BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; OG; CI; OM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

3/3, K/15 (Item 4 from file: 399)  
DI ALG(R) File 399: CA SEARCH(R)

Untitled  
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140334320 CA: 140(21)334320J JOURNAL  
The YefM Antitoxin Defines a Family of Native and Unfolded Proteins: Implications as a Novel Antibacterial Target  
AUTHOR(S): Cherny, Izhack; Gazit, Ehud  
LOCATION: George S. Wise Faculty of Life Sciences, Department of Molecular Microbiology and Biotechnology, Tel-Aviv University, 69978, Tel-Aviv, Israel  
JOURNAL: J. Biol. Chem. (Journal of Biological Chemistry) DATE: 2004  
VOLUME: 279 NUMBER: 9 PAGES: 8252-8261 CODEN: JBCHA3 ISSN: 0021-9258  
LANGUAGE: English PUBLISHER: American Society for Biochemistry and Molecular Biology

3/3/K 16 (Item 5 from file: 399)  
DI ALCG(R) File 399: CA SEARCH(R)  
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130048562 CA: 130(5)48562q JOURNAL  
The structure and organization within the membrane of the helices composing the pore-forming domain of *Bacillus thuringiensis* delta-a-endotoxin are consistent with an "umbrella-like" structure of the pore  
AUTHOR(S): Gazit, Ehud; La Rocca, Paolo; Sansom, Mark S. P.; Shai, Yechiel  
LOCATION: Department of Biological Chemistry, Weizmann Institute of Science, 76100, Rehovot, Israel  
JOURNAL: Proc. Natl. Acad. Sci. U. S. A. DATE: 1998 VOLUME: 95  
NUMBER: 21 PAGES: 12289-12294 CODEN: PNASAB ISSN: 0027-8424  
LANGUAGE: English PUBLISHER: National Academy of Sciences

3/3/K 17 (Item 6 from file: 399)  
DI ALCG(R) File 399: CA SEARCH(R)  
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128044828 CA: 128(5)44828s JOURNAL  
*Bacillus thuringiensis* Cytolytic Toxin Associates Specifically with Its Synthetic Helices A and C in the Membrane Bound State. Implications for the Assembly of Oligomeric Transmembrane Pores  
AUTHOR(S): Gazit, Ehud; Burshtein, Noga; Eltar, David J.; Sawyer, Trevor; Shai, Yechiel  
LOCATION: Department of Membrane Research and Biophysics, Weizmann Institute of Science, 76100, Rehovot, Israel  
JOURNAL: Biotechnology DATE: 1997 VOLUME: 36 NUMBER: 49 PAGES: 15546-15554 CODEN: BIOTAW ISSN: 0006-2960 PUBLISHER ITEM IDENTIFIER: 0006-2960(97)00758-7 LANGUAGE: English PUBLISHER: American Chemical Society

3/3/K 18 (Item 7 from file: 399)  
DI ALCG(R) File 399: CA SEARCH(R)  
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123027507 CA: 123(3)27507r CONFERENCE PROCEEDING  
Membrane interaction and hemolytic activity of the alpha 5 helix of delta-a.-endotoxin  
AUTHOR(S): Gazit, Ehud; Shai, Yechiel  
LOCATION: Membrane Research and Biophysics, Weizmann Institute of Science, Rehovot, 76100, Israel  
JOURNAL: Recent Adv. Mol. Biotech Res. Proteins, Proc. IUBMB Symp. Protein Structure Funct. EDITOR: Wei, Yau-huei (Ed), Chen, Chiing-san (Ed),  
Page 10

Untitled

Su, Jong-ching (Ed.), DATE: 1993 PAGES: 145-53 CODEN: 61HNAL LANGUAGE:  
English MEETING DATE: 920000 PUBLISHER: World Sci., Singapore, Singapore

3/3, K/19 (Item 8 from file: 399)  
DI ALCG(R) File 399: CA SEARCH(R)  
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122003545 CA: 122(1)3545e JOURNAL  
The alpha.-5 segment of *Bacillus thuringiensis*, delta,-endotoxin: in vitro activity, ion channel formation and molecular modeling.  
AUTHOR(S): Gazit, Ehud; Bach, Diana; Kerr, Ian D.; Sansom, Mark S. P.; Chejnovsky, Nor; Shai, Yechiel  
LOCATION: Dep. Membrane Res. Biophys., Weizmann Inst. Sci., 76100, Rehovot, Israel  
JOURNAL: Biochem. J. DATE: 1994 VOLUME: 304 NUMBER: 3 PAGES: 895-902  
CODEN: BIJOAK ISSN: 0264-6021 LANGUAGE: English

3/3, K/20 (Item 9 from file: 399)  
DI ALCG(R) File 399: CA SEARCH(R)  
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118163181 CA: 118(17)163181d JOURNAL  
Structural and functional characterization of the .alpha.5 segment of *Bacillus thuringiensis*, delta,-endotoxin  
AUTHOR(S): Gazit, Ehud; Shai, Yechiel  
LOCATION: Dep. of Membrane Res. Biophys., Weizmann Inst. Sci., 76100, Rehovot, Israel  
JOURNAL: Biochemistry DATE: 1993 VOLUME: 32 NUMBER: 13 PAGES: 3429-36  
CODEN: BIACHE ISSN: 0006-2960 LANGUAGE: English

3/3, K/21 (Item 1 from file: 185)  
DI ALCG(R) File 185: Zoological Record Online(R)  
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04966596 BIOSIS No. 14008048631  
The role of *Bacillus thuringiensis* Cry1C and Cry1E separate structural domains in the interaction with *Spodoptera littoralis* gut epithelial cells.  
AUTHORS: Avi sar, Dror; Keller, Menahem; Gazit, Ehud; Prudovsky, Evgenia; Sneh, Baruch; Zilberman, Avi ah (a)  
AUTHORS ADDRESS: (a) Tel Aviv Univ., George S Weizmann Fac Life Sci., IL-69978 Tel Aviv; Israel avi ah@post.tau.ac.il  
SOURCE: Journal of Biological Chemistry 279(16), April 16 2004: 15779-15786. [Print]  
DOCUMENT TYPE: Article  
ISSN: 0021-9258  
LANGUAGES: English SUMMARY LANGUAGES: English  
RECORD TYPE: Abstract

AUTHORS: Avi sar, Dror; Keller, Menahem; Gazit, Ehud; Prudovsky, Evgenia; Sneh, Baruch; Zilberman, Avi ah...

... ABSTRACT: higher  $K_{max}$  and lower  $K_d$  than Cry1C domain II and further supported the existence of toxin multisite interactions. Competitive bi binding assays were used to estimate the sequence of interaction events. Cry1C...

... three domains specifically interact with the epithelial cell membrane. The folding of the three-domain toxin probably dictates the sequence of interaction events.

Untitled

3/3, K/22 (Item 1 from file: 149)  
DI ALCGI (R) File 149: TGG Health&Wellness DB(SM)  
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03335715 SUPPLIER NUMBER: 163707106 (USE FORMAT 7 OR 9 FOR FULL TEXT  
)

The *yefM-yoeB* toxin-antitoxin systems of *Escherichia coli* and  
*Streptococcus pneumoniae*: functional and structural correlation. (Author  
abstract)  
Ni et al., Concha; Cherny, Izhack; Khoo, Seok Kooi; de Lacoba, Mario Garcia;  
Chan, Wai Ting; Yeo, Chew Chieneng; Gazit, Ehud; Espinosa, Manuel  
Journal of Bacteriology, 189, 3-4, 1266(13)  
Feb,  
2007

DOCUMENT TYPE: Author abstract PUBLICATION FORMAT: Magazine/Journal  
ISSN: 0021-9193 LANGUAGE: English RECORD TYPE: Abstract  
TARGET AUDIENCE: Academic

The *yefM-yoeB* toxin-antitoxin systems of *Escherichia coli* and  
*Streptococcus pneumoniae*: functional and structural correlation. (Author  
abstract)  
...Gazit, Ehud

AUTHOR ABSTRACT: Toxin-antitoxin loci belonging to the *yefM-yoeB*  
family are located in the chromosome or in...  
...of *Streptococcus pneumoniae*, and these genes encode bona fide antitoxin  
(Yef(M sub. Spn)) and toxin (Yoe(B sub. Spn)) products. We showed that  
overproduction of Yoe(B sub. Spn), is...

...homologous, whereas the antitoxins appeared to be specifically designed  
for each bacterial locus; thus, the toxin-antitoxin interactions were  
adapted to the different bacterial environmental conditions. Both  
structural features, tolding and...  
? E AU=CHERNY, IZHACK?

Ref	Item	Index-term
E1	1	AU=CHERNY, IV
E2	27	AU=CHERNY, IZHACK
E3	0 *	AU=CHERNY, IZHACK?
E4	1	AU=CHERNY, J
E5	8	AU=CHERNY, J. J.
E6	1	AU=CHERNY, J. V.
E7	1	AU=CHERNY, JULIUS
E8	1	AU=CHERNY, L
E9	10	AU=CHERNY, L.
E10	3	AU=CHERNY, LYLY
E11	2	AU=CHERNY, LYNN
E12	1	AU=CHERNY, LYNN M

Enter P or PAGE for more

? S E1- E2  
1 AU=CHERNY, IV  
27 AU=CHERNY, IZHACK  
S4 28 E1- E2  
? S S4 AND TOXIN  
28 S4  
1070891 TOXIN  
S5 21 S4 AND TOXIN  
? RD

>>>Duplicate detection is not supported for File 393.

Untitled  
>>> Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

S6 7 RD (unique items)

? T S6/3, K1-7

>>>KWC option is not available in file(s): 399

6/3, K1 (Item 1 from file: 24)  
DI ALCG(R) File 24: CSA Life Sciences Abstracts  
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0003013616 IP ACCESSION NO: 7288149  
The yefM-yoeB Toxin-Antitoxin Systems of *Escherichia coli* and  
*Streptococcus pneumoniae*: Functional and Structural Correlation

Nieto, Concha; Cherny, Izack; Khoo, Seok Kooi; de Lacoba, Mario  
Garcia; Chan, Wei Ting; Yeo, Chew Chieng; Gazit, Ehud; Espinosa, Manuel  
Centro de Investigaciones Biologicas, CSIC, Madrid, Spain. Department of  
Molecular Microbiology and Biotechnology, Tel Aviv University, Tel Aviv  
69978, Israel. Department of Biotechnology, Malaysia University of Science  
and Technology, Petaling Jaya, Malaysia

Journal of Bacteriology, v 189, n 4, p 1266-1278, February 2007  
PUBLICATION DATE: 2007

PUBLISHER: American Society for Microbiology, 1752 N Street N.W.  
Washington, DC 20036 USA, [URL: <http://www.asm.org/>]

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0021-9193

ELECTRONIC ISSN: 1098-5530

FILE SEGMENT: Bacteriology Abstracts (Microbiology B)

The yefM-yoeB Toxin-Antitoxin Systems of *Escherichia coli* and  
*Streptococcus pneumoniae*: Functional and Structural Correlation

Nieto, Concha; Cherny, Izack; Khoo, Seok Kooi; de Lacoba, Mario  
Garcia; Chan, Wei Ting; Yeo, Chew Chieng; Gazit...

#### ABSTRACT:

Toxin-antitoxin loci belonging to the yefM-yoeB family are located  
in the chromosome or in...

... locus of *Streptococcus pneumoniae*, and these genes encode bona fide  
antitoxin (YefM sub(Spn)) and toxin (YoeB sub(Spn)) products. We  
showed that overproduction of YoeB sub(Spn) is toxic to...

... homologous, whereas the antitoxins appeared to be specifically designed  
for each bacterial locus; thus, the toxin-antitoxin interactions were  
adapted to the different bacterial environmental conditions. Both  
structural features, folding and...

6/3, K2 (Item 2 from file: 24)  
DI ALCG(R) File 24: CSA Life Sciences Abstracts  
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0002893868 IP ACCESSION NO: 6517911  
The YoeB Toxin Is a Folded Protein That Forms a Physical Complex with  
Page 13

Untitled  
the Unfolded YefM Antitoxin: Implications for a structural-based  
differential stability of toxin-antitoxin systems

Cherny, Izhack; Rockah, Liat; Gazit, Ehud

Department of Molecular Microbiology and Biotechnology, George S. Weizmann Faculty of Life Sciences, Tel Aviv University, Tel Aviv 69978, Israel

Journal of Biological Chemistry, v 280, n 34, p 30063-30072, August 2005  
PUBLICATION DATE: 2005

PUBLISHER: American Society for Biochemistry and Molecular Biology, 9650 Rockville Pike Bethesda MD 20814-3996 USA, [mailto:[asrbm@asrbm.faseb.org](mailto:asrbm@asrbm.faseb.org)], [URL: <http://www.jbc.org>]

DOCUMENT TYPE: Journal Article

RECORD TYPE: Abstract

LANGUAGE: English

SUMMARY LANGUAGE: English

ISSN: 0021-9258

ELECTRONIC ISSN: 1083-351X

FILE SEGMENT: Bacteriology Abstracts (Microbiology B); Genetics Abstracts

The YoeB Toxin Is a Folded Protein That Forms a Physical Complex with the Unfolded YefM Antitoxin: Implications for a structural-based differential stability of toxin-antitoxin systems

Cherny, Izhack; Rockah, Liat; Gazit, Ehud

**ABSTRACT:**

The chromosomal YoeB-YefM toxin-antitoxin module common to numerous strains of bacteria is presumed to have a significant role...

...protein, as we previously reported for the Phd antitoxin in the P1 phage Doc-Phd toxin-antitoxin system. Here we report the purification and structural properties of the YoeB toxin and present physical evidence for the existence of a tight YoeB-YefM polypeptide complex in...

...physical complex between the proteins. Near- and far-UV circular dichroism spectroscopy of the purified toxin revealed that, similar to the Doc toxin, YoeB is a well-folded protein. Thermal denaturation experiments confirmed the conformational stability of the YoeB toxin, which underwent reversible thermal unfolding at temperatures up to 56 degree C. The thermodynamic features of the toxin-antitoxin complex were similar. Taken together, our results support the notion of a correlation between differential physiological and structural stability in toxin-antitoxin modules.

IDENTIFIERS: YoeB toxin; YefM toxin

6/3/K3 (Item 1 from file: 98)  
DISCGR File 98: General Sci Abs  
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6009748 H. W. WILSON RECORD NUMBER: BGSA07151710  
Structural and Thermodynamic Characterization of the Escherichia coli RelBE Toxin-Antitoxin System: Indication for a Functional Role of Differential Stability

Cherny, Izhack  
Overgaard, Martin; Borch, Jonas  
Biotechnology (American Chemical Society) v. 46 no43 (October 30 2007) p. 12152-63

Untitled

DOCUMENT TYPE: Feature Article

SPECIAL FEATURES: Bi b l i o g r a p h i c Footnote Graph I l l u s t r a t i o n T a b l e ISSN:  
0006-2960

LANGUAGE: English

COU NTRY OF PUBLICATION: United States

Structural and Thermodynamic Characterization of the Escherichia coli RelBE Toxin-Antitoxin System: Indication for a Functional Role of Differential Stability  
Cherny, Izhack

6/3, K/4 (Item 1 from file: 399)

DI ALCG(R) File 399: CA SEARCH(R)

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147482564 CA: 147(23)482564b CONFERENCE PROCEEDING

Bacterial toxin-antitoxin systems as targets for the development of novel antibiotics

AUTHOR(S): Alonso, Juan C.; Balsa, Dolores; Cherny, Izhack; Christensen, Susanne K.; Espinosa, Manuel; Francuski, Dzordje; Gazit, Ehud; Gerdens, Kenn; Hitchin, Ed; Martin, M. Teresa; Nieto, Concepcion; Overweg, Karin; Pellecer, Teresa; Saenger, Wolfgang; Heinz; Welfle, Karin; Wills, Jerry

LC CATION: Department of Microbiology Biotechnology, Centro Nacional de Biología Molecular, CSIC, Madrid, Spain, 28049

JOURNAL: Enzyme-Mediated Resist. Antibi ot. (Enzyme-Mediated Resistance to Antibiotics) EDITOR: Bonomo, Robert A. (Ed); Tolimsky, Marcelo (Ed)

DATE: 2007 PAGES: 313-329 CODEN: 69J1C6 LANGUAGE: English PUBLISHER: American Society for Microbiology, Washington, D. C.

6/3, K/5 (Item 2 from file: 399)

DI ALCG(R) File 399: CA SEARCH(R)

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142367629 CA: 142(20)367629m PATENT

Antibacterial agents disrupting toxin-antitoxin binding and methods of identifying and utilizing such agents

INVENTOR/AUTHOR: Gazit, Ehud; Cherny, Izhack

LC CATION: Israel

ASSIGNEE: Ramat at Tel Aviv University Ltd.

PATENT: PCT International ; WO 200531362 A2 DATE: 20050407

APPLI CATION: WO 20041 L898 (20040927) \*US 2003PV507488 (20031002) \*US 2004PV50334 (20040308)

PAGES: 108 pp. CODEN: PI XXD2 LANGUAGE: English

PATENT CLASSIFI CATIONS:

CLASS: G01N-033/68A

DESI GNATED COUNTRY ES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BW; BY; BZ; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; EG; ES; FI; GB; GD; GE; GH; GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU; LV; MA; MD; MG; MN; MW; MX; MZ; NA; NI; NO; NZ; OM; PG; PH; PL; PT; RO; RU; SC; SD; SE; SG; SK; SL; SY; TJ; TM; TN; TR; TT; TZ; UA; UG; US; UZ; VC; VN; YU; ZA; ZM; ZW DESI GNATED REGI ONAL: BW; GH; GM; KE; LS; MW; MZ; NA; SD; SL; SZ; TZ; UG; ZM; ZW AM; AZ; BY; KG; KZ; MD; RU; TJ; TM; AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LU; MC; NL; PL; PT; RO; SE; SI; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW; ML; MR; NE; SN; TD; TG

6/3, K/6 (Item 3 from file: 399)

DI ALCG(R) File 399: CA SEARCH(R)

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Untitled

140334320 CA: 140(21)334320] JOURNAL  
The YefM Antitoxin Defines a Family of Native Unfolded Proteins:  
Implications as a Novel Antibacterial Target  
AUTHOR(S): Cherny, Izhack; Gazit, Ehud  
LOCATION: George S. Wise Faculty of Life Sciences, Department of  
Molecular Microbiology and Biotechnology, Tel-Aviv University, 69978,  
Tel-Aviv, Israel  
JOURNAL: J. Biol. Chem. (Journal of Biological Chemistry) DATE: 2004  
VOLUME: 279 NUMBER: 9 PAGES: 8252-8261 CODEN: JBCHAS ISSN: 0021-9258  
LANGUAGE: English PUBLISHER: American Society for Biochemistry and  
Molecular Biology

6/3, K/7 (Item 1 from file: 149)  
DI ALCG R File 149: TGG Health&Wellness DB(SM)  
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03335715 SUPPLIER NUMBER: 163707106 (USE FORMAT 7 OR 9 FOR FULL TEXT )

The yefM-yoeB toxin-antitoxin systems of *Escherichia coli* and  
*Streptococcus pneumoniae*: functional and structural correlation. (Author abstract)

Nieto, Concha; Cherny, Izhack; Khoo, Seok Kooi; de Lacoba, Mario  
Garcia; Chan, Wei Ting; Yeo, Chew Chieng; Gazit, Ehud; Espinosa, Manuel  
Journal of Bacteriology, 189, 3-4, 1266(13)  
Feb,

2007 DOCUMENT TYPE: Author abstract PUBLICATION FORMAT: Magazine/Journal  
ISSN: 0021-9193 LANGUAGE: English RECORD TYPE: Abstract

TARGET AUDIENCE: Academic c

The yefM-yoeB toxin-antitoxin systems of *Escherichia coli* and  
*Streptococcus pneumoniae*: functional and structural correlation. (Author abstract)

... Cherny, Izhack

AUTHOR ABSTRACT: Toxin-antitoxin loci belonging to the yefM-yoeB family are located in the chromosome or in...  
... of *Streptococcus pneumoniae*, and these genes encode bona fide antitoxin (YefM sub.Spn) and toxin (YoeB sub.Spn) products. We showed that overproduction of YoeB sub.Spn), i.e...

... homologous, whereas the antitoxins appeared to be specifically designed for each bacterial locus; thus, the toxin-antitoxin interactions were adapted to the different bacterial environmental conditions. Both structural features, folding and...  
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Set	Items	Description
S1	278	E1-E4
S2	42	S1 AND TOXIN
S3	22	RD (unique items)
S4	28	E1-E2
S5	21	S4 AND TOXIN
S6	7	RD (unique items)